Original Article

A Rare Case Of Left Iliac Fossa Pain Diagnosed With Acute Appendicitis – Case Report

Dr. Gayathry Santhosh[1], *Dr. Sudhir Jaykar[2]

1. Junior Resident, Department of General Surgery, Dr. D. Y. Patil Medical College, Hospital & Research Centre, Dr. D. Y. Patil Vidyapeeth, Pune, India
2. Professor, Department of General Surgery, Dr. D. Y. Patil Medical College, Hospital & Research Centre, Dr. D. Y. Patil Vidyapeeth, Pune, India

***Corresponding Author:**
Dr. Sudhir Jayakar, Professor, Department of General Surgery, Dr. D. Y. Patil Medical College, Hospital & Research Centre, Dr. D. Y. Patil Vidyapeeth, Pune, India
Email ID: sudhirjayakar@gmail.com
DOI: 10.47750/pnr.2022.13.S09.1132

Abstract

Acute appendicitis is one of the most common emergency surgical conditions which classically presents with right lower quadrant pain. Left sided acute appendicitis is an atypical presentation and has been reported rarely. However, in patients with situs inversus, midgut malrotation, or an extremely long appendix, left lower quadrant pain can be a symptom of appendicitis, and hence be misdiagnosed leading to perforation of appendix. We report a case of left sided acute appendicitis occurring in a patient with situs inversus.

Keywords: Acute Appendicitis, Situs Inversus, Malrotation, Left Iliac Fossa Pain

INTRODUCTION

One of the most frequent symptoms for emergency calls to the casualty is abdominal pain. The most frequent surgical cause of acute abdominal pain is acute appendicitis, with lifetime risks for men and women being 8.6% and 6.7%, respectively [1]. With a 1:1000 yearly incidence, it is a disease condition that is rather prevalent [2]. Situs inversus totalis and midgut malrotation are two different forms of congenital malformations that are associated with the development of left-sided acute appendicitis [3]. Delayed identification of left sided appendicitis in these patients can result in perforation and its associated aftereffects. In this case report, we describe a rare instance of left-sided appendicitis in a patient with situs inversus totalis.

CASE REPORT

A 28-year-old female came to the Casualty with complaints of pain in left lower abdomen since 3 days duration, insidious in onset, non-radiating, non-migrating. It was associated with fever and multiple episodes of vomiting since 2 days. Patient was passing normal stools and flatus. On Per abdominal examination localized guarding in the left iliac fossa (LIF) with rebound tenderness was present. All biochemical investigations were within normal limits, except for total leukocyte count which was 13,400. Ultrasonography of abdomen revealed inflamed appendix (8mm in calibre) in the left iliac fossa without any periappendicular fluid collection with other findings in abdomen suggestive of situs inversus. A chest radiography showed dextrocardia. Emergency open appendicectomy was performed. Inflamed appendix was resected and sent for histopathology. Postoperatively,

patient showed good recovery and was discharged on post operative day 5. CT scan of abdomen was done to confirm situs totalis inversus. HPE report was suggestive of acute appendicitis.

Figure 1

Figure 2

Figure 1: Incision taken in left iliac fossa, with left sided acute appendicitis

Figure 2: Chest radiography showing dextrocardia in patient with situs inversus totalis

DISCUSSION

One of the most frequent cases of abdominal pain that requires immediate surgical intervention in the emergency department is acute appendicitis. Acute appendicitis typically manifests as a severe abdominal pain in the right iliac fossa; however, it can also begin in the umbilical or epigastric region and migrate there [4]. Usually, nausea, vomiting and fever are also present. Patients may exhibit right iliac fossa discomfort, guarding, a positive psoas sign, or even rebound tenderness upon examination [5]. The most accurate and specific investigation of diagnosing acute appendicitis is CT scan of the abdomen and pelvis [6].

A case report and literature review of left sided acute appendicitis (LSAA) was reported by Akbulut et al. in 2010. Nearly 97% of LSAA cases were linked to congenital disorders, which included 24.2% of malrotation cases and 69.4% of situs inversus case [7].

Situs inversus is a rare disorder brought on by a single incompletely penetrant autosomal recessive gene. Situs inversus totalis is the total reversal of all organs, whereas partial situs inversus only involves the partial reversal of one of the thoracic or abdominal cavities. An incidence of 1:5000 to 1:10,000 live births are reported [8]. Intestinal malrotation happens when the basic intestinal loop does not rotate around the SMA axis or rotates only partially during the first 10 weeks of foetal life [9]. Although it is infrequent in adults (0.1%–0.5%), it typically goes undiagnosed [10].

Although USG is frequently used to diagnose appendicitis, it has considerable drawbacks, including operator dependence and the risk of intestinal gas or obese habitus interfering with the assessment of the lower quadrant [11]. CT scans can be used when USG does not confirm appendicitis. The gold standard radiological test for identifying acute appendicitis is the CT scan. Additionally, a CT scan can also diagnose intestinal malrotation and situs inversus totalis.

Intestinal obstruction (including volvulus) or perforation, pyelonephritis, nephrolithiasis, testicular torsion, atypical right-sided appendicitis, epididymitis, left-sided appendicitis, and left-sided primary epiploic appendagitis are some differential diagnoses for left lower quadrant pain [12].

CONCLUSION

In cases of situs inversus, like in our case, the risk of misdiagnosis and complications like perforation and abscess can be decreased by a strong suspicion of appendicitis in patients with left lower abdominal pain and an emergency exploration after the diagnosis is confirmed by imaging modalities such as abdominal CT or sonography.

REFERENCES

1. Addiss DG, Shaffer N, Fowler BS, Tauxe RV: The epidemiology of appendicitis and appendectomy in the United States. Am J Epidemiol. 1990, 132:910-925.

2. Song JY, Rana N, Rotman CA. Laparoscopic appendectomy in a female patient with situs inversus: case report and literature review. JSLS, 2004;8:175–177.
3. Akbulut S, Ulku A, Senol A, Tas M, Yagmur Y. Left-sided appendicitis: review of 95 published cases and a case report. World J Gastroenterol. 2010 Nov 28;16(44):5598-602..
4. Sidibé, K. , Ossibi, P. , Traoré, Z. , Kamaoui, I. , Lamrani, Y. , Boubbou, M. , Maâroufi, M. , Oudou, A. , Laalim, S. , Mazaz, K. and Tizniti, S. (2016) Left Sided Acute Appendicitis: Radiological Aspects. Open Journal of Radiology, 6, 96-99.
5. Wagner JM, McKinney WP, Carpenter JL: Does this patient have appendicitis?. JAMA. 1996, 276:1589-1594.
6. Evrimler S, Okumuser I, Unal N. Computed tomography (CT) findings of a diagnostic dilemma: atypically located acute appendicitis. Pol J Radiol. 2016;81:583–588.
7. Akbulut S, Ulku A, Senol A, Tas M, Yagmur Y. Left-sided appendicitis: review of 95 published cases and a case report. World J Gastroenterol. 2010;16:5598–5602.
8. Jackson ML, Shah SK, Agarwal AK. Acute Appendicitis in a Patient With Situs Inversus Totalis and Malrotation CRSLS e2019.00001. DOI: 10.4293/CRSLS.2019.00001.
9. Stringer DA, Jamieson D: Small bowel. Pediatric Gastrointestinal Imaging and Intervention. Stringer DA, Babyn PS (ed): B.C. Decker Inc, London; 2000. 2:311-475.
10. Lin CJ, Tiu CM, Chou YH, Chen JD, Liang WY, Chang CY: CT presentation of ruptured appendicitis in an adult with incomplete intestinal malrotation. Emerg Radiol. 2004.
11. Sami A, Ulku A, Senol A, TAS M, Yagmur Y, et al. Left-sided appendicitis: review of 95 published cases and a case report. World J Gastroenterol. 2010;16(44):5598.
12. Cartwright SL, Knudson MP: Evaluation of acute abdominal pain in adults. Am Fam Physician. 2008, 77:971-978.